DSM SL-DSM-10-0350

Research field:

Radiation-matter interactions / Solid state physics, chemistry and nanosciences

Biological chemistry / Life Sciences

Title:

Potential application of ultrafast X rays : toward a real time detection of DNA structural changes under irradiation

Abstract:

The aim of this study is to measure in real time changes in DNA structure exposed to ionizing irradiation. This will be performed by a combination of high intensity laser excitation to trigger DNA damages and of ultrafast X ray scattering to follow the impact of those damages on DNA structure. The results are thought to contribute to a better understanding of the mechanism of DNA strand break formation by ionizing radiations but also by "chemical" oxidizing agents, such as radicals produced in normal or pathological metabolic processes.

Location:

Institut rayonnement et matière de Saclay
Service Interdisciplinaire sur les Systèmes Moléculaires et les Matériaux
Laboratoire de Radiolyse (LCF)
Starting date: 01/09/2010
Centre : Saclay

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